

IN THE SPECIFICATION:

On page 1, before the first paragraph of the application, please insert the following:

This is a continuation of prior U.S. Application Serial No. 09/800,260, filed March 6, 2001, now U.S. Patent No. 6,660,434, issued December 9, 2003.

Please replace paragraphs 4, 8, and 13 with the following new paragraphs.

[0004] Various graphite additives have been proposed for enhancing this service performance of batteries. For example, U.S. Pat. No. 5,482,798 to Mototani, et al. disclose the use of expanded graphite particles having an average particle size in the range from 0.5 to 15 μ m, the expanded graphite comprising between 2 to 8 wt. % of the solids in the mixed cathode active material. Synthetic or artificial graphite is preferred by Mototani, et al. because of its lower level of impurities, such as iron. See also, International Publication WO 99/34673, which discloses an ~~electro-chemical~~ electrochemical cell in which the cathode includes expanded graphite particles having an average particle size between 17 to 32 μ m and having kerosene absorption value in the range of 2.2 to 3.5 ml/g. The surface area to mass ratio, tap density, Scott density, and the purity level of the expanded graphite are also specified. An expanded graphite having these characteristics, and the method of producing such an expanded graphite [[art]], are disclosed in the co-pending applications Ser. No. 09/253,957, filed February 22, 1999, incorporated by reference herein, and having the same assignee as the present application.

[0008] These objects, as well as other that will become apparent upon reference to the following detailed description and accompanying drawings, are achieved by an engineered carbonaceous material (ECM) comprising a mixture of synthetic graphite and one or more other graphite, such as natural flake graphite, natural vein graphite, and/or amorphous graphite. The objects are also achieved by an ECM comprising a mixture of expanded graphite and one or more other graphite materials, such as natural flake graphite, natural vein graphite, amorphous graphite and/or synthetic graphite, in which the carbonaceous material has a purity of between

90.0 and 99.9% C (based on LOI). The ECM is preferably mixed with 0.01 to 20.0 wt% MnO_2 to create a battery active material. The mixtures may be made by either co-blending or co-grinding the graphites together. The mixtures may contain between 0.1 and 99.9 wt % expanded graphite and may be further combined with from between and including 92.0 and 95.2 wt% MnO_2 . An electrochemical cell incorporating the material is also contemplated.

[0013] There are few requirements for the conductive graphites for alkaline batteries. Purity is one of them. Low purity material may contain some battery "poisons", which usually act as catalysts for side reactions that lead to gassing and increased self-discharge of the battery. Another requirement for the conductive additives is to have maximized "connectivity" properties. "Connectivity" is an indication of how well and uniformly the particles of the active material, binder, conductive additive and any other additives to the electrode matrix are interconnected with each other. If connectivity is poor, some parts of an electrode made of such material will be excluded from the electrochemical process, resulting in reduced overall battery performance.